

t71_jgraph_5
(TMT7iEBaTFRkBiDXKLb2xu1PwAgwQLdiAVi)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_topmetr : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let

$r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X4.((\neg v1_xboole_0 X4) \wedge ((v2_compts_1 X4 (k15_euclid \\
& np_2)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& np_2)))))) \Rightarrow (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 \\
& (k15_euclid np_2)))) \Rightarrow (((X4 = ReplSep (toset (\lambda X6 : \iota.m1_subset_1 \\
& X6 (u1_struct_0 (k15_euclid np_2)))) (\lambda X6 : \iota.k12_euclid \\
& X6 = np_1) (\lambda X6 : \iota.X6)) \wedge ((r1_jordan6 X4 X0 X1) \wedge ((r1_jordan6 \\
& X4 X1 X2) \wedge (r1_jordan6 X4 X2 X3)))) \Rightarrow (\forall X6.((v1_funct_1 X6) \wedge \\
& ((v1_funct_2 X6 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2))) \wedge (m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& k5_topmetr) (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\forall X7. \\
& ((v1_funct_1 X7) \wedge ((v1_funct_2 X7 (u1_struct_0 k5_topmetr) (u1_struct_0 \\
& (k15_euclid np_2))) \wedge (m1_subset_1 X7 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\
& (\neg (v5_pre_topc X6 k5_topmetr (k15_euclid np_2)) \wedge ((v2_funct_1 \\
& X6) \wedge ((v5_pre_topc X7 k5_topmetr (k15_euclid np_2)) \wedge ((v2_funct_1 \\
& X7) \wedge ((X5 = ReplSep (toset (\lambda X8 : \iota.m1_subset_1 X8 (u1_struct_0 \\
& (k15_euclid np_2)))) (\lambda X8 : \iota.r1_xxreal_0 np_1 (k12_euclid \\
& X8)) (\lambda X8 : \iota.X8)) \wedge ((k1_funct_1 X6 k6_numbers = X0) \wedge ((k1_funct_1 \\
& X6 np_1 = X2) \wedge ((k1_funct_1 X7 k6_numbers = X3) \wedge ((k1_funct_1 X7 \\
& np_1 = X1) \wedge ((r1_tarski (k2_relset_1 (u1_struct_0 (k15_euclid \\
& np_2)) X6) X5) \wedge ((r1_tarski (k2_relset_1 (u1_struct_0 (k15_euclid \\
& np_2)) X7) X5) \wedge (r1_xboole_0 (k2_relset_1 (u1_struct_0 (k15_euclid \\
& np_2)) X6) (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X7))))))))))))))))) \\
& \tag{1}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 k5_topmetr) \\
& (u1_struct_0 (k15_euclid np_2))) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2)))))) \Rightarrow (\neg (v5_pre_topc X0 k5_topmetr (k15_euclid np_2)) \wedge \\
& ((v2_funct_1 X0) \wedge (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 \\
& X1 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid np_2))) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 k5_topmetr) \\
& (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\neg (k1_funct_1 X1 k6_numbers = \\
& k1_funct_1 X0 np_1) \wedge ((k1_funct_1 X1 np_1 = k1_funct_1 X0 k6_numbers) \wedge \\
& ((k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X1 = k2_relset_1 \\
& (u1_struct_0 (k15_euclid np_2)) X0) \wedge ((v5_pre_topc X1 k5_topmetr \\
& (k15_euclid np_2)) \wedge (v2_funct_1 X1))))))))) \\
& \tag{2}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X4.((\neg v1_xboole_0 X4) \wedge ((v2_compts_1 X4 (k15_euclid \\
& np_2)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& np_2)))))) \Rightarrow (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 \\
& (k15_euclid np_2)))) \Rightarrow (((X4 = ReplSep (toset (\lambda X6 : \iota.m1_subset_1 \\
& X6 (u1_struct_0 (k15_euclid np_2)))) (\lambda X6 : \iota.k12_euclid \\
& X6 = np_1) (\lambda X6 : \iota.X6)) \wedge ((r1_jordan6 X4 X0 X1) \wedge ((r1_jordan6 \\
& X4 X1 X2) \wedge (r1_jordan6 X4 X2 X3)))) \Rightarrow (\forall X6.((v1_funct_1 X6) \wedge \\
& ((v1_funct_2 X6 (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid \\
& np_2))) \wedge (m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& k5_topmetr) (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\forall X7. \\
& ((v1_funct_1 X7) \wedge ((v1_funct_2 X7 (u1_struct_0 k5_topmetr) (u1_struct_0 \\
& (k15_euclid np_2))) \wedge (m1_subset_1 X7 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 k5_topmetr) (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\
& (\neg(v5_pre_topc X6 k5_topmetr (k15_euclid np_2)) \wedge ((v2_funct_1 \\
& X6) \wedge ((v5_pre_topc X7 k5_topmetr (k15_euclid np_2)) \wedge ((v2_funct_1 \\
& X7) \wedge ((X5 = ReplSep (toset (\lambda X8 : \iota.m1_subset_1 X8 (u1_struct_0 \\
& (k15_euclid np_2)))) (\lambda X8 : \iota.r1_xxreal_0 np_1) (k12_euclid \\
& X8)) (\lambda X8 : \iota.X8)) \wedge ((k1_funct_1 X6 k6_numbers = X0) \wedge ((k1_funct_1 \\
& X6 np_1 = X2) \wedge ((k1_funct_1 X7 k6_numbers = X1) \wedge ((k1_funct_1 X7 \\
& np_1 = X3) \wedge ((r1_tarski (k2_relset_1 (u1_struct_0 (k15_euclid \\
& np_2)) X6) X5) \wedge ((r1_tarski (k2_relset_1 (u1_struct_0 (k15_euclid \\
& np_2)) X7) X5) \wedge (r1_xboole_0 (k2_relset_1 (u1_struct_0 (k15_euclid \\
& np_2)) X6) (k2_relset_1 (u1_struct_0 (k15_euclid np_2)) X7))))))))))))))
\end{aligned}$$